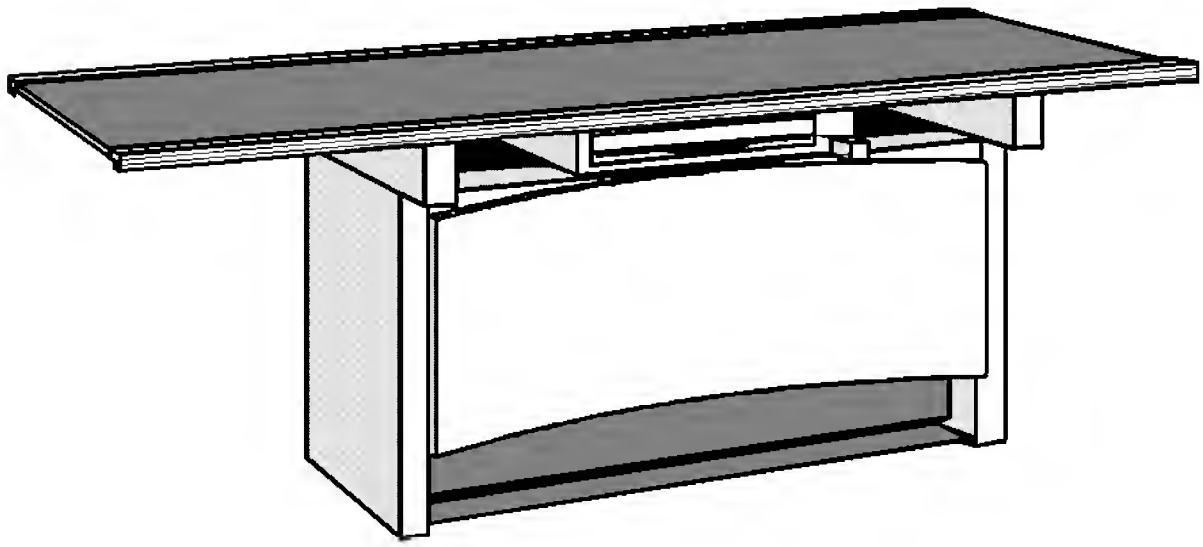
Mounting Instructions COORDINATUS-2



CE 0125

English Edition

Revision 02 © 1998 Hans Pausch Röntgengerätebau Graf-Zeppelin-Str. 1 D-91056 Erlangen ALL RIGHTS RESERVED Ru

TABLE OF CONTENTS *Page*

1. Specification

1.1 General safety notes 3
1.2 Compatibility 3
1.3 Climatic conditions 3
1.4 Dimensions and weights 3
1.5 Component Designation 4
1.6 Dimensional Drawings 5
1.7 Dimensional Drawings/Floor Mounting 6
1.8 Installation of high tension cables 7
1.9 Constructional preparations 7
1.10 Necessary measuring means 7
1.11 Necessary special tools 7
1.12 Power supply data 7
1.13 Schematics 8
1.14 Component Numbers and Designation 11

2. Mounting of Unit

2.1 Unpack equipment parts 12
2.2 Mounting of the table 13
2.3 Mounting of Bucky 14
2.4 Mounting of the table top 14
2.5 Mounting of the table top in small rooms 15
2.6 Function control 15
2.7 Mounting of covers 15

3. Adjustments

3.1 Adjustment of Bucky in transverse direction of table 16

4.0 Technical Maintenance

4.1 Mechanical and electrical tests 16
4.2 Spare Parts Table 19
4.3 Spare Parts List 20
4.4 Maintenance Documentation 21
4.5 Name Plate Location 22

Revision 02 © 1998 Hans Pausch Röntgengerätebau Graf-Zeppelin-Str. 1 D-91056 Erlangen ALL RIGHTS RESERVED Ru

1. Technical data

1.1 General safety notes

In the Federal Republic of Germany, the electrical installation of rooms for medical purposes must conform to the provisions VDE Standard 0107. In all other countries the national requirements have to be observed.
Check the installation layout plan.
During the installation it is important to check that all protective ground wire connections provided by the manufacturer are properly made before the equipment is started up.
The protective ground wires between the individual system components and the power supply have to be connected as shown in the wiring diagram.
Regulation of professional associations concerning safety and accident prevention has to be observed. No work may be performed on parts carrying a voltage higher than 42 V. If it is necessary to turn on the power for execution of movements of the equipment in the course of installation procedure, it must be shut down immediately after completion of these movements.

1.2 Compatibility

This mounting instruction is valid for COORDINATUS-2 and all versions of them.
The table carries all customary in trade Bucky units.
A Bucky Wall stand can be installed on the right or left side of the table depending on the user side.

1.3 Climatic conditions

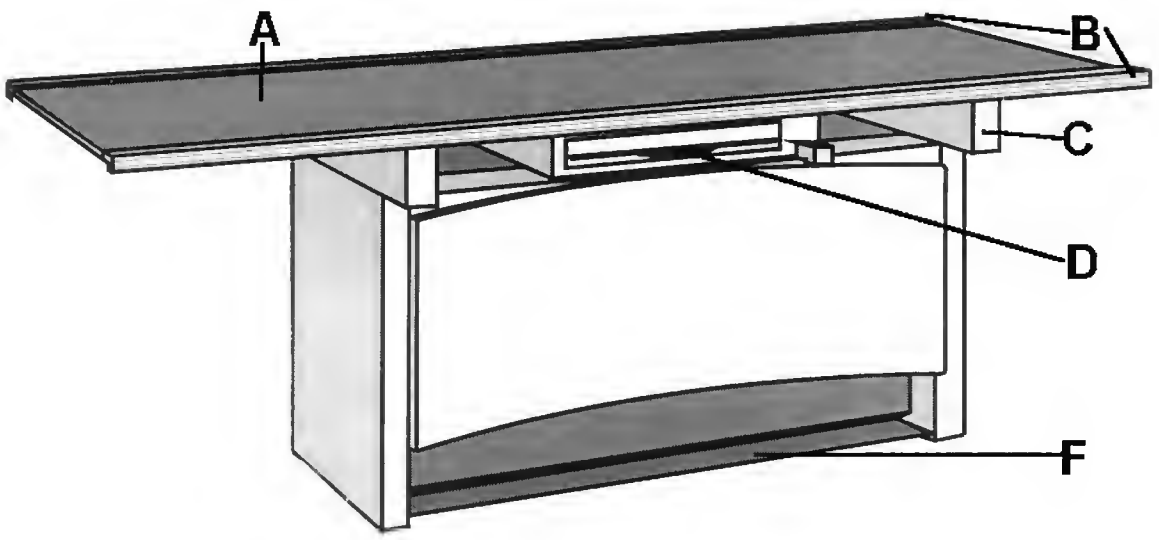
During regular work:	
Temperature:	10° C to 40° C
Humidity:	20% to 80%
Air pressure:	700 hPA to 1100 hPa
During transport:	
Temperature:	-25° C to 70° C
Humidity:	5% to 95%
Air pressure:	600 hPA to 100 h PA

1.4 Dimensions and weights

of components	Dimensions of components	Weights
Table	1400x770x750 mm	110 kg
Table top	2200x810x 40 mm	35 kg
of collies	**Dimensions of collies**	**Weights**
Table	1530x860x960 mm	165 kg
Table top	2320x930x200 mm	56 kg

Revision 02 © 1998 Hans Pausch Röntgengerätebau Graf-Zeppelin-Str. 1 D-91056 Erlangen ALL RIGHTS RESERVED Ru

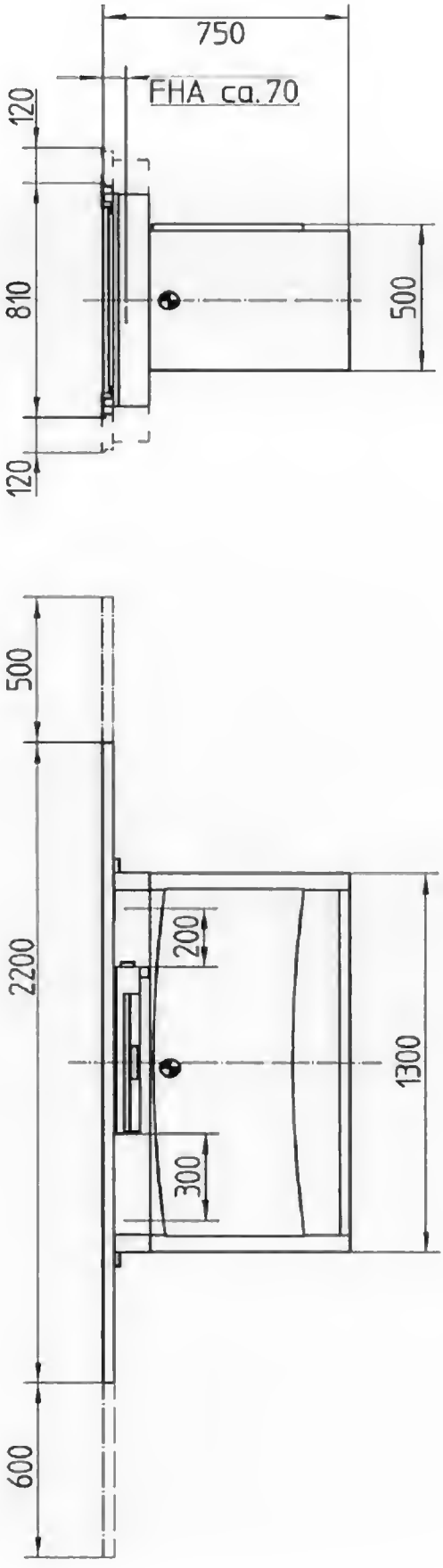
1.5 Component Designation



A Table top, floating, manually movable, scratch-proof
B Profile rail with trim cover, smooth, accepts accessories
C Upper table frame
D Bucky unit, movable
E Table base, solid, vibration-free
F Guide rails for tube stand
G Foot treadle

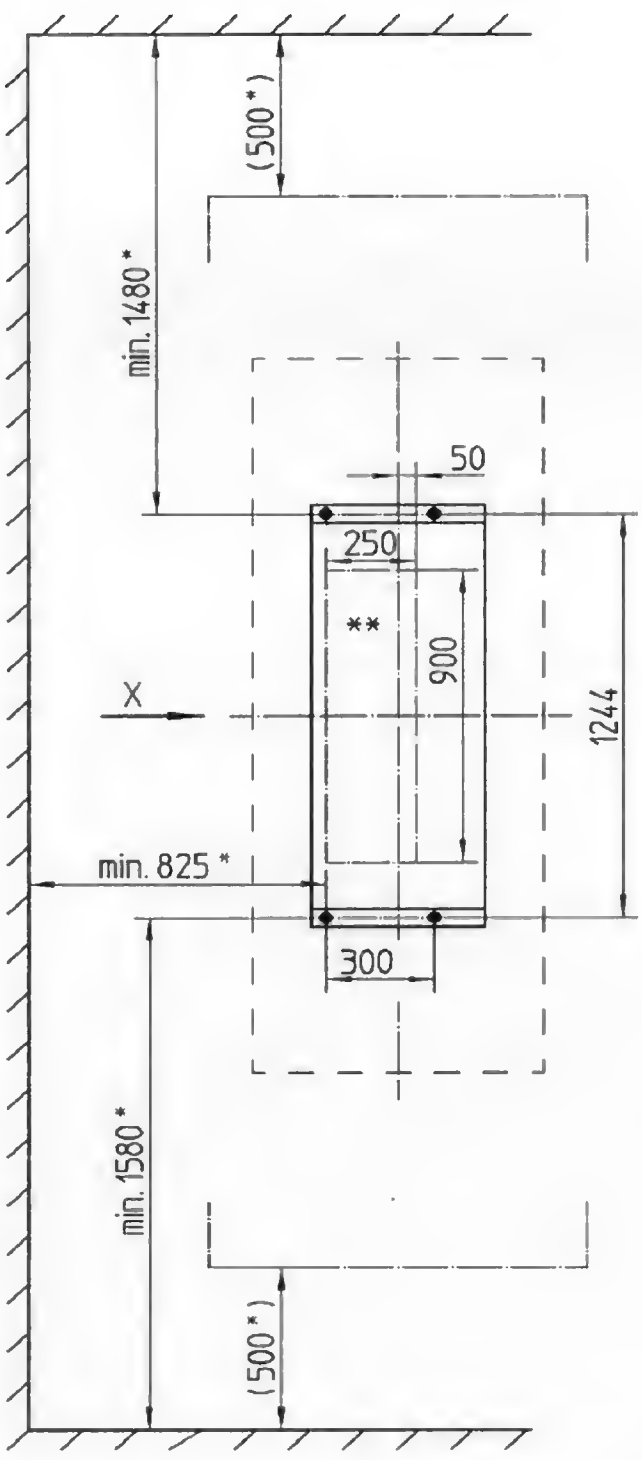
Revision 02 © 1998 Hans Pausch Röntgengerätebau Graf-Zeppelin-Str. 1 D-91056 Erlangen ALL RIGHTS RESERVED Ru

1.6 Dimensional Drawings



Revision 02 © 1998 Hans Pausch Röntgengerätebau Graf-Zeppelin-Str. 1 D-91056 Erlangen ALL RIGHTS RESERVED Ru

1.7 Dimensional Drawings/Floor Mounting

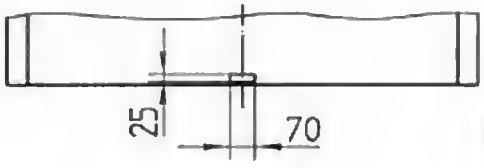


o Befestigungspunkte / floor mounting holes

* Mindestabstände nach DIN 31001
min. distances according to DIN 31001

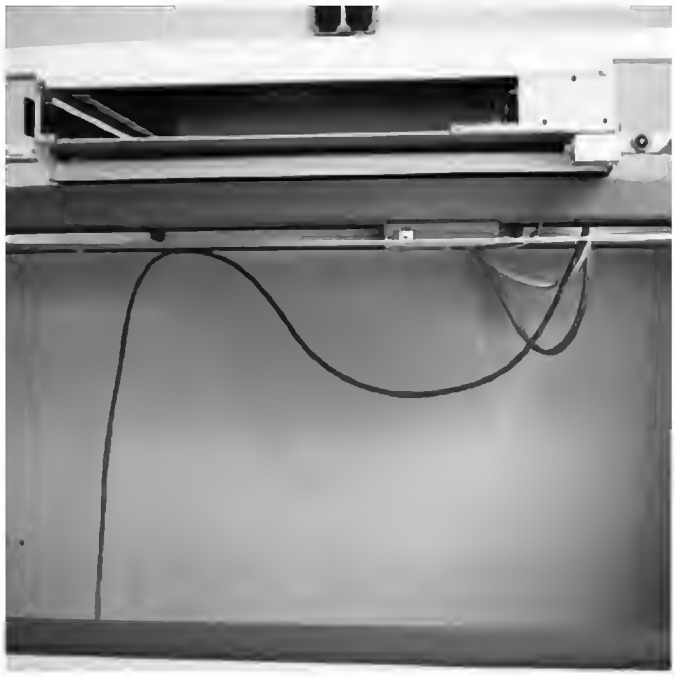
** möglicher Kabelaustritt am Fußboden
cable outlet area on the floor

Ansicht X
(rückseitiger Kabeleinlaß)



Revision 02 © 1998 Hans Pausch Röntgengerätebau Graf-Zeppelin-Str. 1 D-91056 Erlangen ALL RIGHTS RESERVED Ru

1.8 Installation of high tension cables



1.9 Constructional preparations

The electrical connection data have to correspond with the of the equipment supply voltage.
For the COORDINATUS-2 is only a supply voltage of 115/230 V required and a corresponding ground connection transmission. The mounting points of the COORDINATUS-2 have to support a tractive power of 2500 N at each mounting point (concrete floor? B 150 DIN 1045 when using the included fastening material).
Prepare on the floor fastening bore-holes of 12 mm according to drawing 1.6., under consideration of the construction.
The connection cable of the COORDINATUS-2, the Bucky and the detector has to be placed constructional depending on the version until the terminal box in the table base or until the Bucky according to the installation plan.
The optional ceiling- wall- terminal box can be mounted if required to the wall or ceiling.

1.10 Necessary measuring means

Machine air level

1.11 Necessary special tools

Percussion bore machine
Rock drill 12 mm

1.12 Power supply data

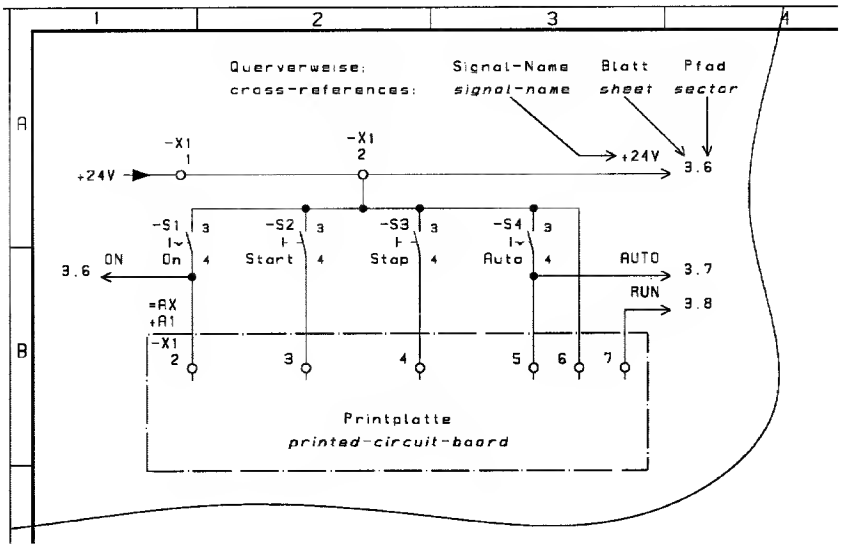
Power supply:	115/230 V
Frequency:	50 / 60 Hz
Rated current:	2/1 A
Rated power supply voltage:	220 VA

Revision 02 © 1998 Hans Pausch Röntgengerätebau Graf-Zeppelin-Str. 1 D-91056 Erlangen ALL RIGHTS RESERVED Ru

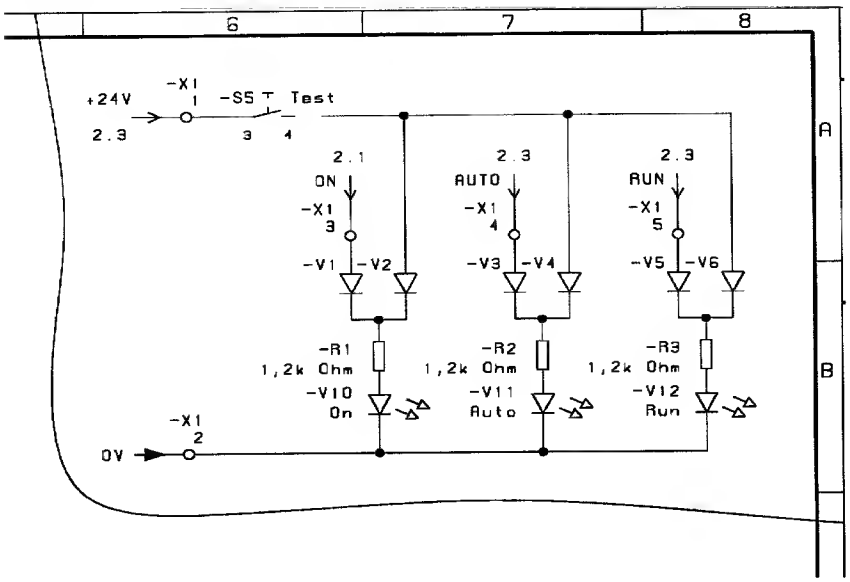
1.13 Schematics sheet 1

1.13.1 Description at Schematics

..... Schematics sheet 2
= AX control panel
= Unit, Indication



..... Schematics sheet 3
= AX control panel
= Unit, Indication

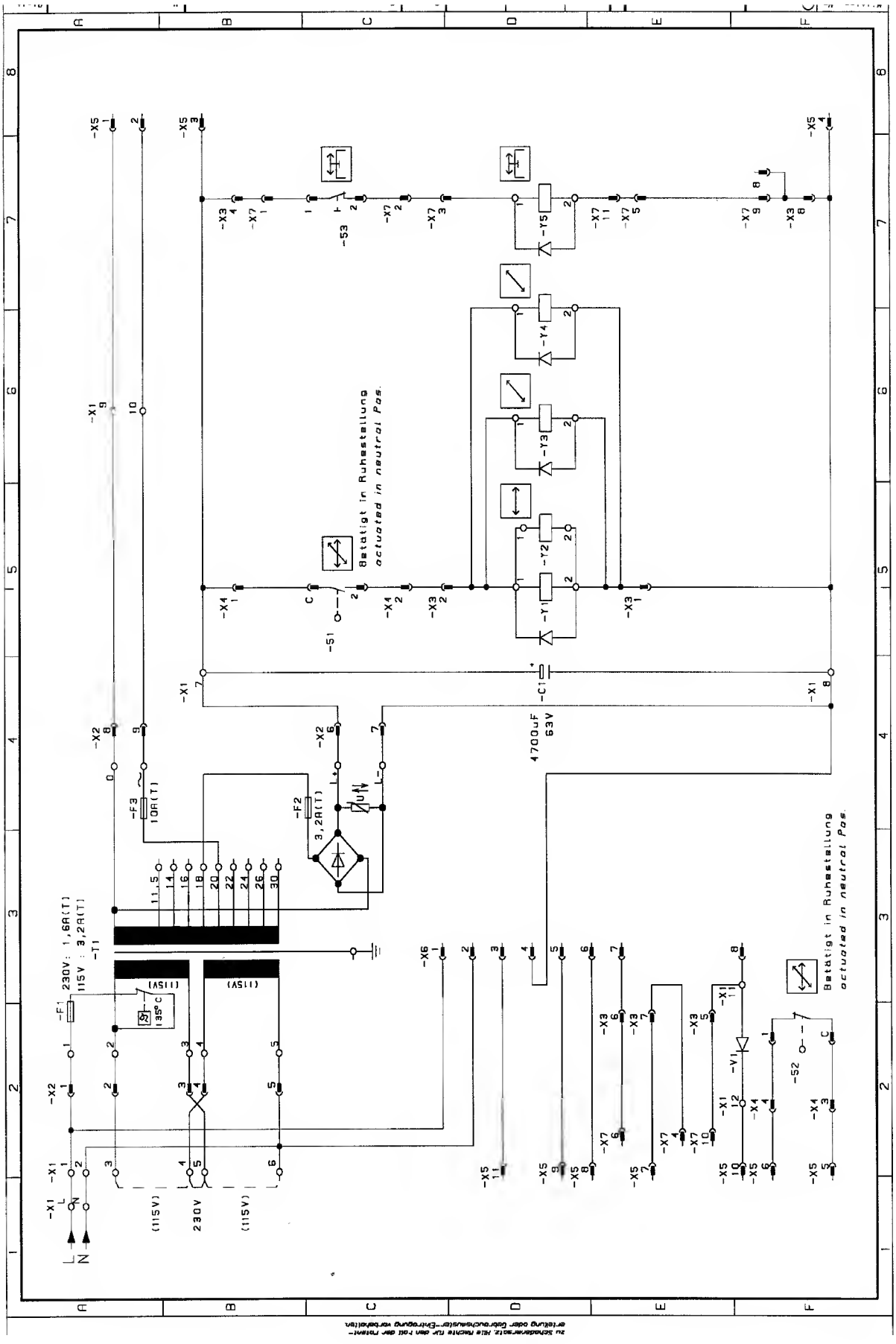


1.13.1 Table of contents at Schematics

Sheet 2	Schematics	=AA
Sheet 3	Wiring diagram	=AA

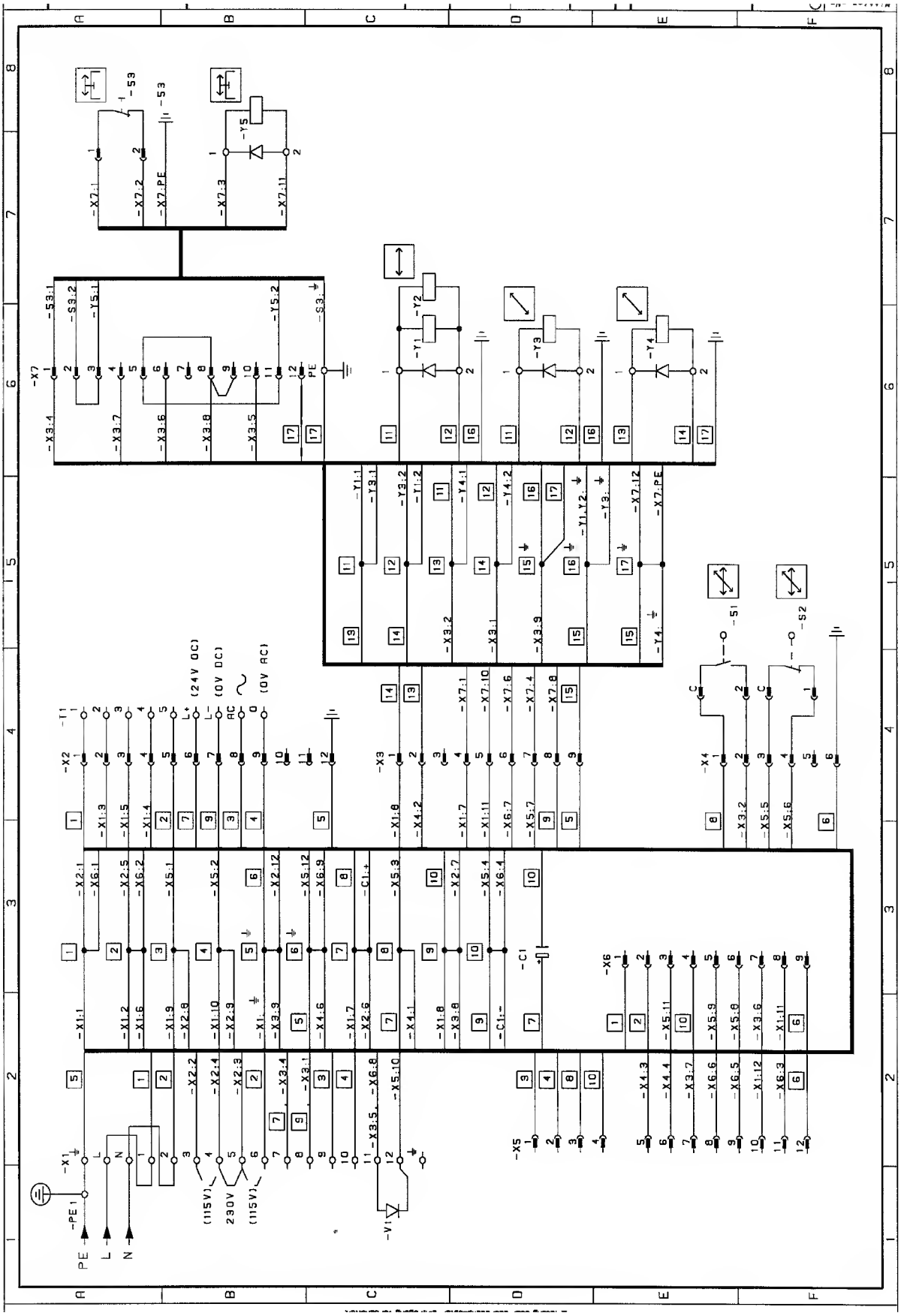
Revision 02 © 1998 Hans Pausch Röntgengerätebau Graf-Zeppelin-Str. 1 D-91056 Erlangen ALL RIGHTS RESERVED Ru

1.13 Schematics sheet 2



Revision 02 © 1998 Hans Pausch Röntgengerätebau Graf-Zeppelin-Str. 1 D-91056 Erlangen ALL RIGHTS RESERVED Ru

1.13 Wiring Diagram sheet 3



Revision 02 © 1998 Hans Pausch Röntgengerätebau Graf-Zeppelin-Str. 1 D-91056 Erlangen ALL RIGHTS RESERVED Ru

1.14 Description of components for circuit diagram

=AA-	**Table**
=AA-C1	By-pass condenser 24V DC
=AA-F1	Curcuit fuse
=AA-F2	Fuse 24V DC
=AA-F3	Fuse 20VAC
=AA-PE1	Main earthing bolt
=AA-S1	Foot control brake release table top
=AA-S2	Foot control for collimator light
=AA-S3	Switch release Bucky brake
=AA-T1	Mains transformer
=AA-V1	Uncoupling diode
=AA-X1	Terminal strip
=AA-X2	Plug in connection power pack
=AA-X3	Plug in connection brake solenoid table top
=AA-X4	Plug in connection foot control
=AA-X5	Plug in connection Column
=AA-X6	Plug in connection Tomo
=AA-X7	Plug in connection Bucky brake
=AA-Y1	Brake solenoid table top longitudinal
=AA-Y2	Brake solenoid table top longitudinal
=AA-Y3	Brake solenoid table top transverse left
=AA-Y4	Brake solenoid table top transverse right
=AA-Y5	Brake solenoid for Bucky brake

Revision 02 © 1998 Hans Pausch Röntgengerätebau Graf-Zeppelin-Str. 1 D-91056 Erlangen ALL RIGHTS RESERVED Ru

2. Mounting

2.1 Unpack equipment parts

In addition:
Remove both artificial caps (Fig. 1 Pos. 1) and loosen beneath the socket head cap screw.
Tilt front plate „above“ (Pos. 2) carefully to the outside and then take out from underneath.
Take out accessory box from the table.

Fig. 1

Fig. 2

Dismount the below placed table cover (Fig. 2/Pos. 3) with both screws (Pos. 4). Loosen both transport screws (Fig. 2/Pos. 5) from the palette and push to the bottom.
Push the table to the back from the palette (Fig. 3). Tilt table to the back, pull out palette to the front and take off the table carefully.

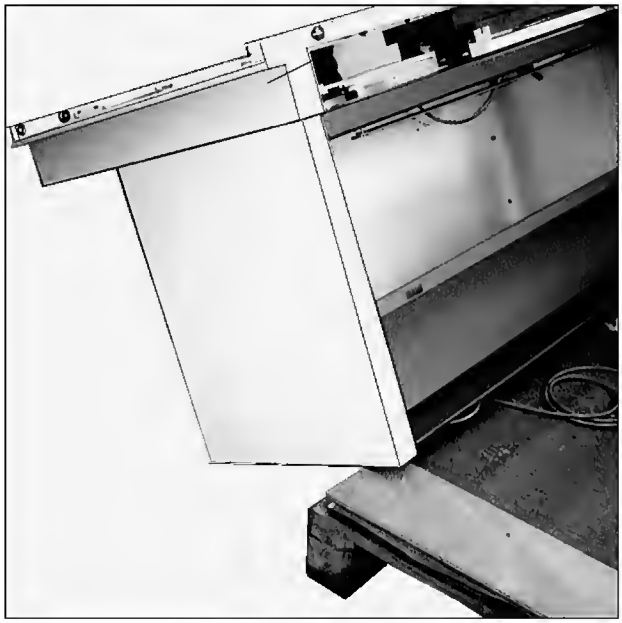


Fig. 3

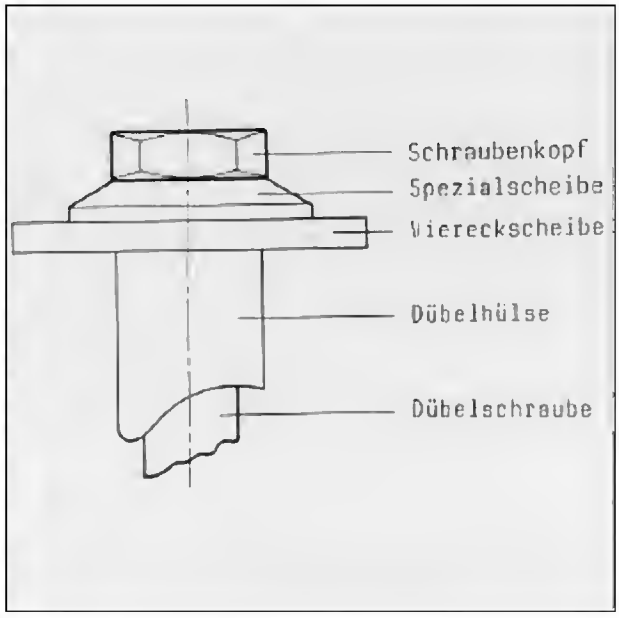


Fig. 4

Revision 02 © 1998 Hans Pausch Röntgengerätebau Graf-Zeppelin-Str. 1 D-91056 Erlangen ALL RIGHTS RESERVED Ru

2.2 Mounting of the table

Take the table to assembly area. Push the table at the assembly place over the fastening bore-holes. Respectively align the table at the assembly place, mark the 4 fastening bore-holes and bore

Fig. 5

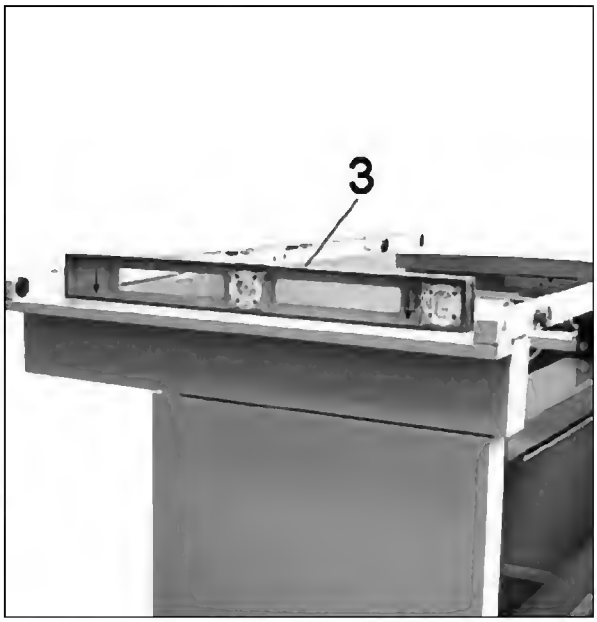


Fig. 6

Insert the included set pin (Fig. 4), screws and washers. Align table with air level (Fig. 5 Pos. 1, 2 and Fig. 6/Pos. 3). If necessary, align with washers (Fig. 7/Pos. 4). Fasten all screws tightly.

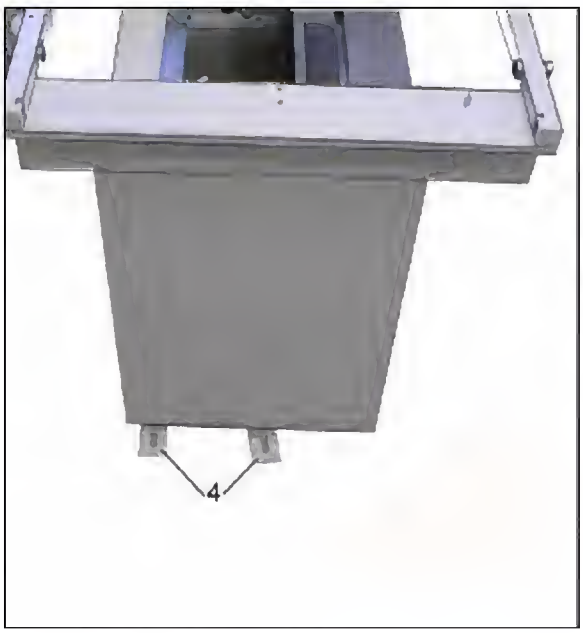


Fig. 7

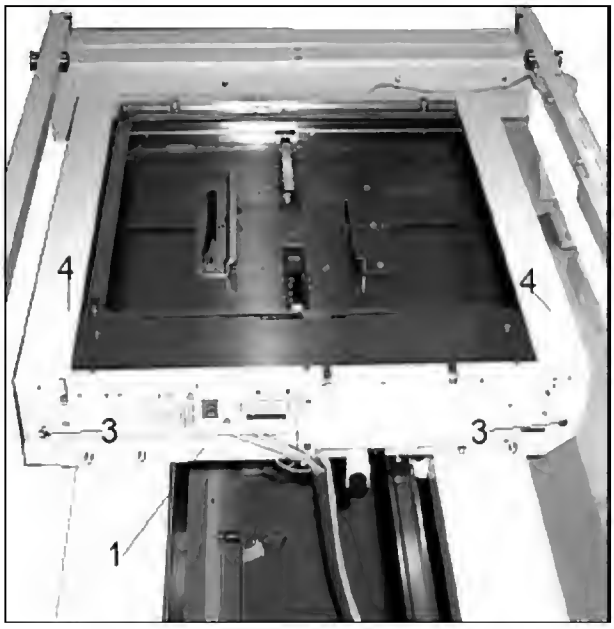


Fig. 8

Revision 02 © 1998 Hans Pausch Röntgengerätebau Graf-Zeppelin-Str. 1 D-91056 Erlangen ALL RIGHTS RESERVED Ru

2.3 Mounting of Bucky

Remark: Buckys of different manufacturers can be installed. The equipment will be prepared according to the order and necessary fastening materials will be included to the shipment. Insert the Bucky (opening of cassette to the front) in the Bucky carriage (Fig. 8/Pos.1).

Bucky P

Fastening with 2 screws each (Fig. 14/Pos. 3) left and right lateral. Put at the top the cover angle with the longer side (Fig. 8/Pos. 4) to user- and back side and fasten in front with 3 screws each and washers.

Philips

Fastening with 2 screws each (Fig. 8/Pos. 3) left and right lateral. Put at the top the cover angle with the longer side (Fig. 8/Pos. 4) to user- and back side and fasten above with 3 screws each.

Siemens

Fastening with 2 screws each (Fig. 8/Pos. 3) left and right lateral.
Connect the power cable and ION Chamber cable according to the instructions of the manufacturer.

2.4 Mounting of the table top

Remark:
If there are less than 2900 mm from the mid of table to a wall available, please mount the table plate according to section 2.5.1.
Remove table plate out of packing. Dismount on one grinding the limit stop (Fig. 9/Pos.1) and push the table top (Fig. 10/Pos.2) on the transverse carriage.

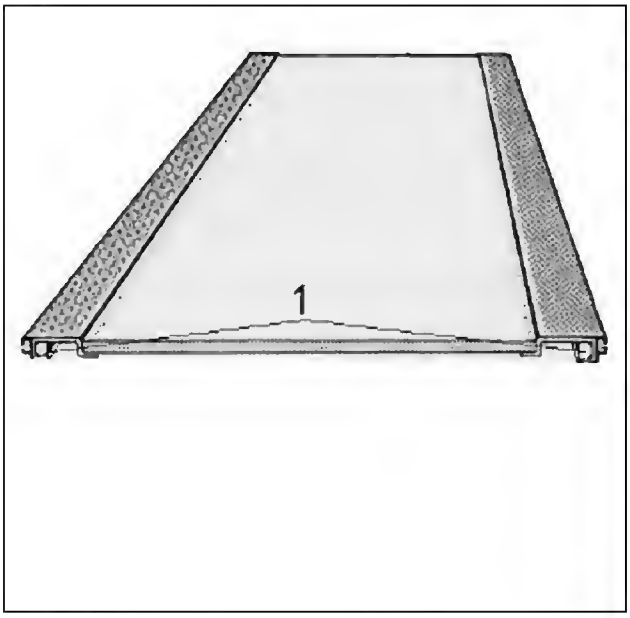


Fig. 9

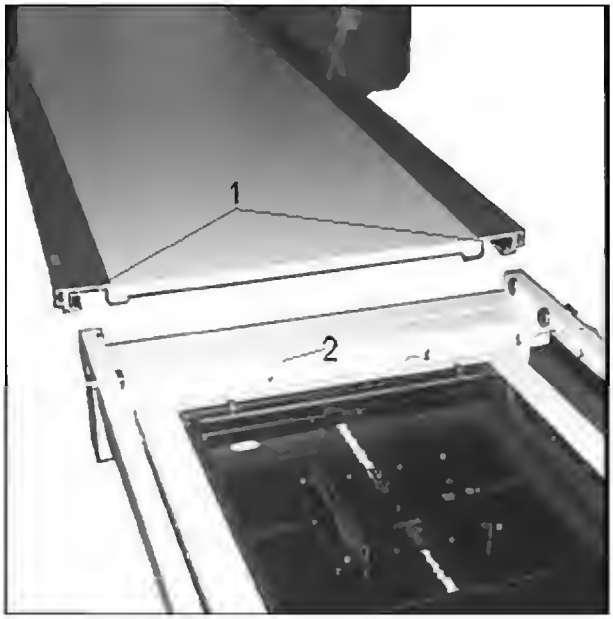


Fig. 10

Revision 02 © 1998 Hans Pausch Röntgengerätebau Graf-Zeppelin-Str. 1 D-91056 Erlangen ALL RIGHTS RESERVED Ru

Fig. 11

Fig. 12

Attention: Pay attention to the brake magnets (Fig. 11/Pos. 1) while inserting the table top.
Remount limit stops (Fig. 9/Pos. 1).
Put the included pasteboard of the table top packing on the table top during assembly to avoid any damages.

2.5 Mounting of the table top in small rooms

Dismount on both grindings the limit stops (Fig. 9/Pos. 1). Dismount the bearings (Fig. 12/Pos. 1 and 2) which are in the front.
Put the table top on the table frame and lift the table top on the user side about 45°. Put meanwhile the table top rail from behind over the Polyamid roll and bearings. Lower the table top carefully. Move the table top longitudinal and remount the dismounted bearings (Fig. 12/Pos. 1 and 2). Readjust the regulations of the eccentric. Remount the limit stops (Fig. 9/Pos.1).
Put the included pasteboard of the table top packing on the table top during assembly to avoid any damages.

2.6 Function control

Switch-on the X-ray generator and control all functions. If necessary adjust corrections according to section 3. Adjustment.

2.7 Mounting of covers

Remount both front covers (Fig. 2/Pos. 3 and Fig. 1/Pos. 2).

Revision 02 © 1998 Hans Pausch Röntgengerätebau Graf-Zeppelin-Str. 1 D-91056 Erlangen ALL RIGHTS RESERVED Ru

3. Adjustment

3.1 Adjustment of Bucky in transverse direction of table

Remove screws (Fig. 8/Pos. 3) on the four fixing plates, adjust the Bucky transversely and tighten afterwards the four screws.

4. Technical Maintenance

4.1 Mechanical and electrical control

The maintenance schedule described below is to be accomplished at 12-months intervals. If functional tests require power, switch off power immediately afterwards.
Defective parts must be replaced by genuine spare parts according to spare part lists. Use only non-acid grease for maintenance. Do not grease or oil ball bearings with sealing washers.

Prelimentary work: Check Coordinatus-2 of damages or missing parts.
Check all cable upon damage especially on the fastening points. If necessary replace or repair as far as possible after consultation with the customer.
Check cable loop of sufficient length.
Check all covers. If necessary replace damaged parts respectively arrange exchange.
Check range of equipment movement on blocked objects. When collision danger appears inform the user of all risks.

Tools: Usual assembly tools, standing ladder, torque balance key, air level, spring balance, feeler, cleansing agent, grease.

Preparations: Switch off equipment.
Dismount bumper and stop (Fig. 20/Pos. 1+2) at either end of the table top from profile rails (lateral).
Take out table top and lay aside securely.
Dismount front cover (Fig. 21/Pos. 1+2).

Revision 02 © 1998 Hans Pausch Röntgengerätebau Graf-Zeppelin-Str. 1 D-91056 Erlangen ALL RIGHTS RESERVED Ru

Fig. 20

Fig. 21

Floor mounting: Check firmness of dowel bolts. Tighten if loose. Torque wrench 50 Nm (5.0 mkp).

Bucky: Check on smooth running over total travel range. Running noise ?
Determine defective bearings. Replace if necessary.
Clean guide rail and bearings and grease lightly.
Check and if necessary adjust eccentric bearing (Fig. 23/Pos. 1).
Correct adjustment: The bearings can still be rotated by hand.
Check bumpers (Fig. 24/Pos. 2) on firmness and damage.

Fig. 22

Fig. 23

Switch-on equipment. Check brake (Fig. 23/Pos. 3) and adjust if necessary.

Revision 02 © 1998 Hans Pausch Röntgengerätebau Graf-Zeppelin-Str. 1 D-91056 Erlangen ALL RIGHTS RESERVED Ru

Table frame: Clean left and right guide shafts (Fig. 25/Pos. 1) and grease lightly.
Switch-on equipment. Check performance brakes (Fig. 25/Pos. 2) for transverse movement. Adjust if necessary.
Check bumpers on both sides (Fig. 25/Pos. 4) on firmness and damage.

Fig. 25

Fig. 26

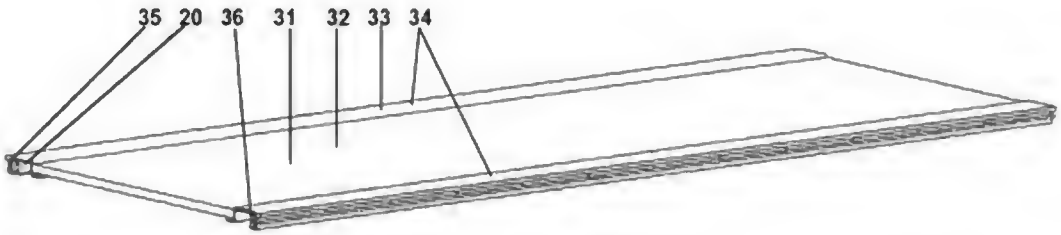
Remount the caps on the left and right side (Fig. 47/Pos. 1).

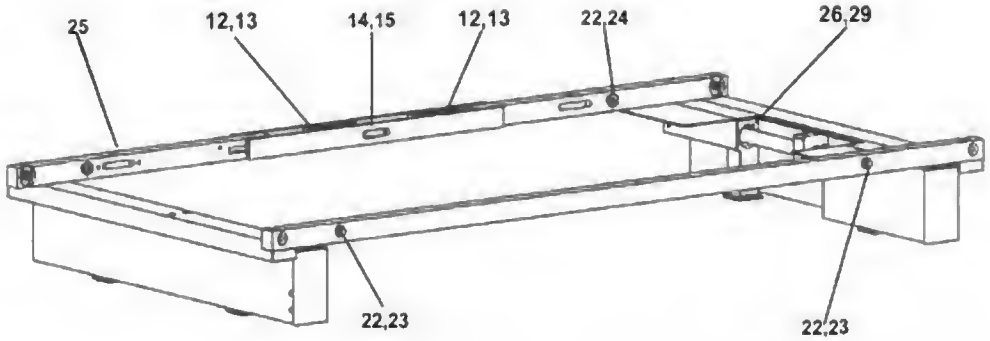
Table top: Check plastic rollers (Fig. 25/Pos. 5) for trace of wear. Replace and grease if necessary.
Clean and check all ball bearings for table top movements on smooth running and damage. Replace and grease if necessary.
Clean guide profiles of the table top.
Insert table top. Move over total travel range.
Running noise ? Smooth running ? Adjust bearings with eccentric (Fig. 25/Pos. 6) if necessary.
Switch-on equipment. Check performance brake (Fig. 25/Pos.7).
Replace brake magnet if necessary.
Remount bumper and stop (Fig. 20/Pos. 1+2) at either end of the table top to profile rails (lateral).

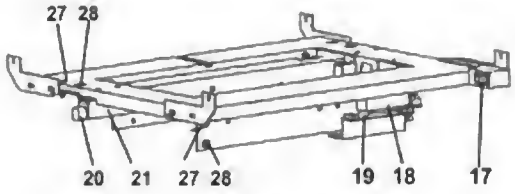
Foot treadle: Check on smooth operation and contact point. Adjust switch (Fig. 26/Pos. 1) if necessary.
Check connections of the switches.
Grease lightly both spring axis and bearing axis.

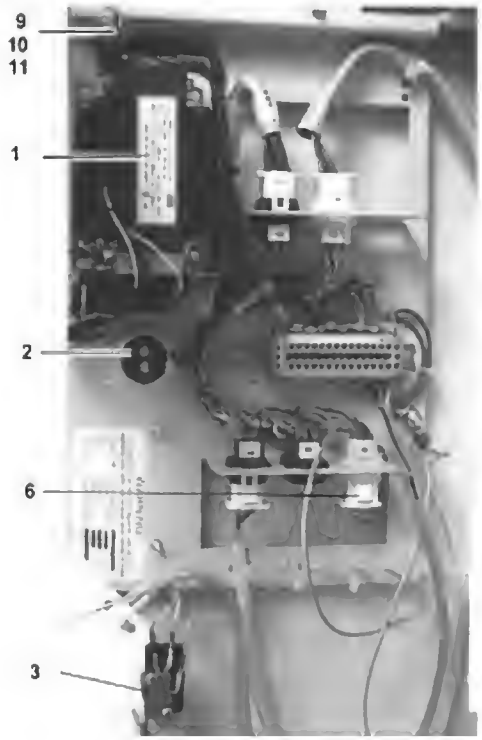
Revision 02 © 1998 Hans Pausch Röntgengerätebau Graf-Zeppelin-Str. 1 D-91056 Erlangen ALL RIGHTS RESERVED Ru

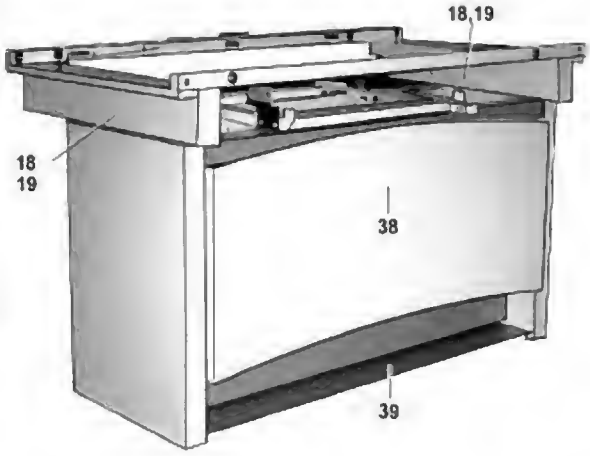
4.2 Spare Parts Table











Revision 02 © 1998 Hans Pausch Röntgengerätebau Graf-Zeppelin-Str. 1 D-91056 Erlangen ALL RIGHTS RESERVED Ru

4.3 Spare Parts List

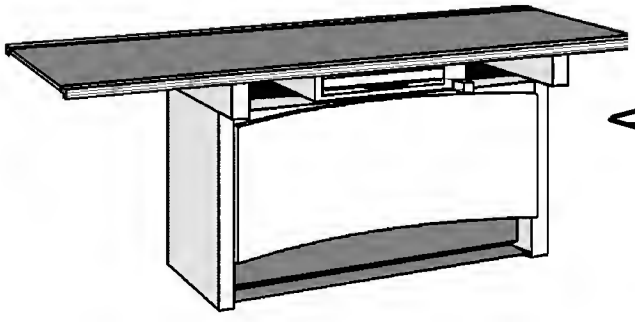
Description / Order No.

Note:
Defective parts must only be replaced by genuine spare parts as listed below. When ordering please always specify the serial number of the unit and the full order number of the part.
Parts or part assemblies may only be replaced by the manufacturer or parties expressly authorised. See also chapter on *„Safety Procedures“*.

Pos.	Description	Order-No.
1	Power supply	0006 0449
2	Condenser	3110 0028
3	Switch	0006 0184
4		
5		
6	Bridge plug	0632 0306
7		
8		
9	Fuse 1,6A	0006 0308b
10	Fuse 3,2A	0006 0308g
11	Fuse 10A	0006 0308k
12	Laminated spring	0632 0418
13	Brake magnet	0006 0603
14	Guide pulley	0632 0420
15	Eccentric	0632 0421
16		
17	Bottom	0006 0720a
18	Brake magnet	0006 0603
19	Laminated spring	0105 0153
20	Bumper	0005 0108
21	Buffer support	0622 0620
22	Bearing with bushing	0622 0555
23		
24	Bearing with bushing	0622 0556
25	Guide pulley	0632 0422
26	Baring	0005 0191a
27	Eccentric	0632 0659
28	Bearing	0632 0657
29	Bearing block	0622 0085a
30		
31	Table top complete	0622 0540a
32	Table top	0622 0548
33	Table top frame	0622 0541
34	Profile rail	0622 0549
35	Stop	0622 0550a
36	Stop	0622 0550b
37		
38	Trough complete	0632 0160
39	Pedal	0632 0125
40		

Revision 02 © 1998 Hans Pausch Röntgengerätebau Graf-Zeppelin-Str. 1 D-91056 Erlangen ALL RIGHTS RESERVED Ru

Name Plate Location:



Revision 02 © 1998 Hans Pausch Röntgengerätebau Graf-Zeppelin-Str. 1 D-91056 Erlangen ALL RIGHTS RESERVED Ru

4.5 Maintenance Certificate

The maintenance according to the attached maintenance instructions has been carried out. Any parts replaced were original spare parts as shown on the list.

Replaced parts (List item no. only)

Date Name of company Signature

Replaced parts (List item no. only)

Date Name of company Signature

Replaced parts (List item no. only)

Date Name of company Signature

Replaced parts (List item no. only)

Date Name of company Signature

Replaced parts (List item no. only)

Date Name of company Signature

Subject to technical alterations TV/Ru

Revision 02 © 1998 Hans Pausch Röntgengerätebau Graf-Zeppelin-Str. 1 D-91056 Erlangen ALL RIGHTS RESERVED Ru